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AUTHOR Duncan, Joan; Laird, James D.
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ABSTRACT

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Cross-Modality Consistencies in Individual Differences in Self-Attributions

Joan Duncan and James D. Laird

Clark University

Abstract

Individual differences in self-attributions in a forced-compliance task and following manipulation of facial expressions were found to relate, suggesting that the self-attribution processes are similar and that variations among individuals in these processes are general across contents and inputs.

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Cross-Modality Consistencies in Individual Differences in Self-Attributions

Consistent individual differences in response to a number of different self-attribution paradigms have been observed recently, but consistencies across these paradigms have not previously been studied. Such consistencies across paradigms, if observed, would support the assumption that the same kinds of processes are involved in different self-attribution tasks, and that the same underlying differences among individuals produce the varying performances on different tasks.

The previous observations of individual differences are all explained in very similar ways. For instance, Schachter (1971) argues that the differences in the eating behavior of obese and normal weight individuals reflect the fact that obese individuals, unlike normals, do not use "internal" cues from the stomach in identifying themselves as "hungry." Similarly, Schachter and Latane (1964) have argued that sociopaths are able to commit illegal and immoral acts because they do not feel intense emotions, e.g., fear, because they are not normally responsive to their variations in visceral arousal, which mediate the intensity of experience of emotions. In both instances, the difference between individuals is presumed to lie in the degree to which they employ "internal" cues as criteria or evidence for attributions of their own motivational or emotional state. A similar explanation was proposed by Laird and Crosby (1974) to explain differences in the extent to which individuals attribute to themselves emotions of different qualities (e.g., the difference between "anger" and "joy") from variations in their expressive behavior.

Laird and Berglas (1975) suggest that a similar difference is also involved in differences in the degree to which individuals change their attitudes in a forced-compliance paradigm. They suggest that the dimension of difference is better conceived as between "self-produced" vs. "situational" cues. "Self-produced" cues include activities of the viscera and of the skeletal muscles in expressive behavior and also overt action, such as the performance of a counter-attitudinal act. "Situational" cues include such things as the time of day and presence of food relevant cues which Schachter has shown are so important to the eating of obese individuals, or the consensual definitions of situations which Laird and Crosby (1974) argue are the alternatives to expressive behavior in definition of the quality of emotional states.

If these conceptions of the sources of individual differences in self-attributions are correct and if this dimension is

general across the various contents and paradigms, then one would expect co-variations in response to all of these various situations. Individuals who change their attitudes in a forced-compliance situation would be expected to experience variations in their emotional quality with manipulations of their expressive behavior, and neither obese nor sociopathic individuals would respond to such manipulations. Since the latter two dimensions of variation, between obese and normal weight, and between sociopathic and normal individuals, are both practically cumbersome, and limited in generalizability, the first investigation of cross-paradigm consistencies was directed at the first two dimensions of variation. Thus, the major focus of this study was on the relationship between responses to the expression manipulation paradigm and response to the forced-compliance paradigm.

Of subsidiary interest was the replication and extension of some of the earlier findings with respect to questionnaire correlates of response to these experimental tasks. In particular, Laird and Berglas (1975) noted that field dependent individuals were described as especially sensitive to cues from their situation, physical or social, while field independent individuals were described as able to rely more consistently on their own, independent "inner" judgements. Consistent with this analysis, Laird and Berglas (1975) found that high scorers on the Embedded Figures Test (the more field independent subjects) were more likely to change their attitudes following counter-attitudinal behavior. In the current study, it was predicted that this relationship would be replicated. In addition, since response to the expression manipulation task depended on the same kind of attentiveness to self-produced cues, it was expected that individuals who scored high on the Embedded Figures Test would also change their emotional experiences in response to the expression manipulation.

Laird and Berglas postulated a second dimension, the degree to which individuals more commonly locate the causes of behavior in persons or in situations. Such variations would affect performance in the forced-compliance paradigm because only subjects who located the causes of their counter-attitudinal behavior in themselves would change their attitudes. Their measure of this dimension, the Locus of Causal Attribution Scale, was related to the degree to which individuals changed their attitudes following counter-attitudinal behavior. This measure has received some further support in another study in which it predicted whether individuals would attribute an impending unpleasant event (eating a worm) to their own properties such as heroism or deservingness of suffering (Comer & Laird, 1975). In the current study, replication of the relation between Locus of Causal Attribution scores and attitude change was expected. It

was not anticipated that Locus of Causal Attribution scores would be related to response to the expression manipulation procedure, inasmuch as it seems unlikely that individuals could locate the causes of the expression anywhere but in themselves.

In sum, then, the major focus of the study was on the relationship between the two attribution tasks, the forced-compliance paradigm and the expression of manipulation. If the differences between individuals in their responses to these attribution tasks were rooted in general "styles" of attending to different kinds of information, then responses to the two paradigms should be correlated. If that hypothesis were confirmed, it would also be expected that Embedded Figures scores would be related to both attribution tasks and the Locus of Causal Attribution scores would be related to response to the forced-compliance procedure.

Methods

Subjects

The subjects were 40 undergraduate student volunteers, 23 women and 17 men. No differences between men and women were observed and hence no further mention of the distinction will be made.

Procedure

The experiment consisted of three parts. In the first part, a brief in-class pre-attitude survey asked potential subjects how they felt on a 19-point scale from "strongly agree" to "strongly disagree" and also how important they felt each issue was on a 10-point scale from "not at all" to "extremely." This survey consisted of items of moderate interest to college students. Some typical items were: "Students should be allowed to take a more active role in organizing undergraduate curriculum," and "Educational institutions should take a more active role in organizing community programs."

Later, subjects were asked to make speeches contrary to one of these items. The actual item from this list used for each subject's counter-attitudinal statement was chosen from among those which he had marked as between 4 and 8 on the importance ratings and between 2 and 8 or 11 and 17 on the Agree/Disagree scale. Thus, no items used were at the extremes of agreement or importance. This technique ensured that the attitude items on which change is to be studied were similar in their importance to the subject, and in the degree of polarization of his opinion. Seven different issues were used and on four some

subjects were initially positive and were induced to make negative speeches about these same issues, while others initially negative were asked to make statements in favor of them. No differences between items in amount of subsequent change were detectable. At the time of the initial survey, subjects also filled out the Locus of Causal Attribution Scale.

Forced-Compliance Procedure

The procedure was analogous to that employed previously by Laird and Berglas (1975). One month after the initial survey, subjects were asked to help the experimenter (ostensibly different from the experimenter in the initial survey) construct video taped stimulus materials for a study.

When the subject arrived, he was told that the experimenter needed a collection of video tapes on various attitude issues. These would be presented to large groups of students on the university campus, to test for any change in their attitudes. The subject was told that the groups of students who would see the tapes would be surveyed repeatedly over a period of time; if the subject were asked about the video tape he had made, he should repeat the same arguments that he had given on the tape. This procedure committed the subject to a long-term public defense of the views he had stated on the video tape.

The experimenter explained to the subject that he would not have to think up any arguments for himself; instead, these had already been prepared and all he had to do was to read them as persuasively as possible.

The experimenter consulted a list of potential issues, selected the appropriate card and asked the subject if he would mind making the statement written on the card. The card contained a sentence beginning: "I would like to tell you why I believe that. . ." and ending with the exact wording of the relevant issue from the subject's initial attitude survey (if he had disagreed previously), or a simple negation of the statement (if he had previously agreed). The subject was video taped reading the statement, and the video tape played back, ostensibly to allow the experimenter to check out the video tape equipment and to give the subject a chance to get used to the camera before supporting arguments were taped. The experimenter then attempted to find a card which contained arguments supporting the video taped statement, announced that they seemed to be lost, and asked the subject to fill out a questionnaire while she searched for them. The questionnaire contained four items, one of which measured the main dependent variable: the extent to which the subject agreed with the statement he had made on video tape.

Upon returning, the experimenter announced she had found the arguments, went to the video machine, and surreptitiously pressed a time-delay switch which turned off the video after the experimenter had returned to the center of the room. The experimenter expressed consternation that the video had "broken," made some efforts to fix the machine, and then asked the subject if he could return at some other time. All subjects agreed.

Expression Manipulation Procedure

This procedure was similar to that employed by Laird and Crosby (1974). As experimenter and subject were leaving the first room, the experimenter appeared to recall that she was helping a professor in a perception experiment and asked the subject if he would be willing to be a subject in that experiment instead. All agreed and were taken to another room, containing a three-dimensional Necker cube and some impressive looking dummy electrophysiological recording equipment. All of this was employed to lead subjects to believe that the experiment was concerned with the activity of the facial muscles during a perceptual task, the observation of the reversing perspectives of the Necker cube. Silver cup electrodes were attached to the subject's face, between the eyebrows, at the corners of the mouth, and at the corners of their jaws, and were apparently connected to a variety of electronic apparatus which actually served no function at all.

After some explanation of the purported measurement procedure, it was explained that subtle emotional changes could affect the activity of the facial muscles and to rule out this source of error, after each trial the subjects would be asked to report their emotions during the trial on a mood adjective check list. As the electrodes were being positioned the experimenter also explained that measurements would be taken from muscles that were relaxed and under contraction, so the subject would be asked to contract and relax various patterns of muscles on each trial.

The first step in each trial was the arrangement of the subject's face. The intent was to arrange their faces into either a "smile," a "frown," or a "neutral" position by asking them to contract various muscles. The instructions varied somewhat depending on the ease with which the subjects adopted a position that looked appropriate to the experimenter, but were approximately as follows.

For the "frown" position:

(Touching lightly the electrodes between the eyebrows)

"Now I'd like you to contract these muscles." (If this was unsuccessful, then) "Contract them by drawing them together and down." (and if this was unsuccessful, then) "Pull your brows down and together." (Whenever the experimenter was satisfied, he said) "Good, now hold it like that."

(Now touching lightly the electrodes near the corners of the mouth) "Now I'd like you to contract these muscles under here." (If this was unsuccessful, then) "Contract them by drawing the corners of your mouth back and up." (When satisfied, the experimenter said) "Good, now hold it like that."

For the "neutral" expression:

"Just relax all the muscles in your face."

The subjects held these positions for 15 seconds and then filled out the mood adjective check list. Each subject underwent two trials of each type, alternating with half of the subjects beginning with the frown and half with the smile.

The mood adjective check list consisted of 26 emotion or mood descriptive adjectives drawn from the short form of the Nowlis-Green Mood Adjective Check List (Nowlis, 1968). Each adjective was rated on a 5-point scale from "Feel strongly" to "Do not feel at all." The 26 adjectives on the list consisted primarily of items from the three mood factors found previously to related to these expression manipulations (Laird, 1974). There were six items from the Aggression factor, five from the Surgency factor, and four from the Elation factor. Scores for these factors were obtained by summing responses across the adjectives and averaging these summary scores across the two trials each of the experimental conditions. The remaining items from the list were fillers which were not analyzed.

At the conclusion of the expression manipulation procedure, subjects filled out a questionnaire about their understanding of the experimental procedures and hypotheses, the Embedded Figures Test (the Hidden Figures Test, Form V, copyright Educational Testing Service) and were debriefed.

Controls for Awareness of Experimental Procedures

At the end of both the forced-compliance and the expression manipulation procedures, subjects responded to relatively long questionnaires assessing subjects' awareness of various aspects of the procedures and hypotheses. In particular, in both parts, if the subjects had reported any awareness that the procedures were affecting their attitudes or emotional experiences, these subjects were excluded. In addition, in the forced-compliance

procedure, any subjects who indicated that they had been asked to make a speech contrary to their initial attitudes were also excluded. This procedure was based on a number of studies which have shown that if subjects are reminded of their prior attitudes (Snyder & Ebbesen, 1972; Wixon & Laird, 1976) or recall them spontaneously (Laird & Berglas, 1975), they do not then change their attitudes. This recall-based inhibition of change is conceptually and, empirically distinct from the cue attentiveness dimension and inclusion of these subjects would have confounded the other analyses (Laird & Berglas, 1975).

At the conclusion of the experiment, two judges blind to the subjects' responses on any of the other experimental tasks independently rated subjects' awareness on each of the two questionnaires separately. For the forced-compliance questionnaire, the judges agreed on 36 of the 40 subjects and on the expression manipulation questionnaire they agreed on 38 of the 40. The disagreements were resolved through discussion.

Results

Ten subjects were judged to be "aware" of their prior attitude or the experimental intent in the forced-compliance procedure and were excluded from those analyses. Nine subjects were judged to have been aware that their expression had affected their emotional experience and were excluded from those analyses. These two groups were not entirely identical so that 14 subjects in all were excluded from the comparison of responses to the two paradigms.

Effectiveness of the Manipulation

Before examining co-variations in response to these procedures, it was desirable to be sure that the anticipated effects had been produced. For the forced-compliance procedure this was straightforward. Both the pre-behavior and post-behavior measures of attitude were on 19-point scales, scored so that change toward the counter-attitudinal behavior would be reflected in larger numbers. The pre-manipulation mean for the 30 nonaware subjects was 5.5. The post-manipulation mean was 12.1 indicating considerable change. This difference was significant [$t(28)=8.65$, $p<.001$].

The analyses in the expression manipulation procedure were somewhat more complex. In the earlier studies with this procedure (Laird, 1974; Laird & Crosby, 1974) only two expression conditions had been employed, the "smile" and the "frown," and the differences between these two had been compared. In those studies it was noted that this procedure did not make clear whether the differences were due to the effects of the

"smile," the "frown," or both, since there was no "neutral" condition to compare with. Therefore, in this study a neutral condition was employed and the "smile" and "frown" scores were compared with this neutral condition separately.

On each trial scores were obtained on the Elation, Surgency and Aggression factors. These were averaged across the two trials in each expression condition. The pattern of these scores is as predicted, with higher Aggression scores in the "frown" condition, relative to both the "smile" and "neutral" conditions, and higher Surgency and Elation scores in the "smile" trials (see Table 1). All of the "smile" trial scores are significantly different from the neutral condition scores, except for Aggression. All of the "frown" trial scores are significantly different from the neutral condition scores.

Insert Table 1 About Here

Thus, it appears that the expression effect was obtained as expected and that it was produced by both the "smile" and the "frown" conditions. The pattern of means suggests that subjects were in a mildly positive mood in this experiment, and not very aggressive at all and that the "frown" expression not only increased Aggression responses, but inhibited Surgency and Elation responses. On the other hand, since subjects' scores in the neutral condition on the Aggression factor were very low, the effect of the "smile" condition could only be to increase Elation and Surgency responses.

It should be noted, incidentally, that scores are not comparable between factors. There are different numbers of adjectives in each factor, but averages were not computed because it is clear that the comparisons would be logically uncertain even if the numbers had been made superficially comparable. A "strong" feeling of annoyance is not clearly equal, less or more than a "strong" feeling of being pleased, for instance.

Relationships Between Attribution Tasks

A score representing the degree to which each subject responded to the expression manipulations was obtained by adding the differences between "smile" and neutral and "frown" and neutral conditions for each of the three emotion factors. The primary hypothesis of this study predicted a relationship between this score and the attitude change scores. However, according to the self-attribution conception of emotion (Laird, 1974), the experience of emotion is a function of two independent sets of bodily cues. The "quality" of the emotional

experience is based on the expressive behavior while the "intensity" of the response is based on the level of visceral arousal (Schachter & Singer, 1962).

Consequently, these total expression effect scores represented some contribution from the expressions confounded with uncontrolled natural variations in subject's level of arousal. For this reason subjects were divided into two groups, as near to the median of the expression effect scores as possible to make the groups as equal in size as possible. Of the 26 subjects who were not excluded from one or the other of the two conditions, 12 had scores below the median (6), and 14 had scores above. The mean attitude change of the group who changed least in the expression manipulation procedure was 4.2, while the mean change of the group who changed most was 8.3. This difference was significant (t=2.46, df22, p<.05). As predicted, then, subjects whose expression affected their emotional experience also adopted the attitude expressed in their counter-attitudinal behavior.

Relationships with Other Measures

The relationship between the questionnaire responses and the subjects' responses to the expression manipulations were tested by the same procedures as above. That is, the mean scores for the two groups above and below the median in the expression effect scores were compared. For the Hidden Figures Test, the scores were 7.8 for the Low expression effect group, and 6.6 for the high group. This difference was not significant (t=.67, n.s.). This finding did not replicate results reported by Laird and Berglas (1975). On the Locus of Causal Attribution Measure the scores were 22.8 for the Low expression group and 18.1 for the High. This difference, as expected, was not significant (t=1.27, n.s.).

The correlation between attitude change scores and these measures were .37 for the Hidden Figures Test (df 27, p<.05) and -.11 for the Locus of Causal Attrition Measure, a non-significant correlation. The first of these correlations represents a replication of that observed by Laird and Berglas (1975) but the second correlation represents a failure to replicate.

The theory suggests an alternative analytic technique for this last relationship, however. The two dimensions of variation proposed to underly responses to the forced-compliance procedure are best seen as having their effects in sequence. That is, if one is in a situation in which the only attitude relevant cues are "self-produced," then an individual who does not attend to those cues has no attrition to make. Thus,

variations in his preferred locus of attribution will be irrelevant. If this is so, then in this study all of the subjects who are in effect "situational cue users" would be contributing only error variance to the correlation between attitude change and the Locus of Causal Attribution Scale. To test this possibility, the correlation was computed separately in the group who were high and low in response to the expression manipulations. In the High response group, the correlation was .33 and in the Low response group it was .08. The difference between the two groups is consistent with the theory, but the difference between the correlations is not significant.

Discussion

The anticipated relationship between responses in the forced-compliance and expression manipulation paradigms was observed. Obviously, then, there were commonalities in the ways subjects approached the two situations. Precisely what those commonalities were is the next question, but first it is important to consider one purely methodological explanation. The predicted relationship can be described "in reverse" as a prediction that the same individual will not respond to the two manipulations. Put this way, it is clear that the relationship could represent no more than a consistent lack of attention to the experimental procedures. This possibility seems relatively unlikely however in the light of the relationship between the forced-compliance task and subjects' scores on the Hidden Figure test. It is improbable that the same subjects who were inattentive in both of the experimental manipulations were suddenly the most attentive and skillful on the Hidden Figures test administered a few minutes later.

The study was predicated on the assumption that the factor common to individual differences in both attribution tasks was variation in the extent to which subjects employed "self-produced" cues in forming self-attributions. The paper and pencil measure thought to reflect this dimension was the Embedded Figures Test. It should, then, have been related to both of the experimental tasks and if anything have related more strongly to the expression manipulation effects than to the forced-compliance. Since it in fact related only to the forced-compliance responses, it is not clear how to interpret this result.

The failure to replicate the relationship between the Locus of Causal Attribution Scale and forced-compliance responses was unexpected of course, but may be explainable in terms of two kinds of method differences between this study and that of Laird and Berglas (1975). The first of these was simply that the Locus of Causal Attribution Scale was administered at the

same time as the pre-attitude measure, about a month before the forced-compliance procedure was run. This seemed appropriate, since it was assumed that the dimension reflected in this measure was stable. However, no data on that proposition has ever been obtained, and if there is any degree of variability over time in this dimension, then such variation would become error variance in this study. A second, probably more important kind of method difference was in the criterion. In the Laird and Berglas study, the criterion to which the Locus of Causal Attribution Scale was related was the average response to two separate forced-compliance sessions, separated by 3 or 4 days. The two separate responses in that study correlated only about .46, suggesting that any one replication is a relatively unreliable criterion. The Laird and Berglas pooled criterion on the other hand had an estimated reliability of .63, representing a reduction of nearly one-fourth of the error variance in the criterion. Perhaps then the weaker results in this study were due to this use of the less reliable single criterion.

A third not entirely methodological possibility was already mentioned above, that the differences in attribution behavior assumed to be reflected in the Locus of Causal Attribution Scale are only relevant in these procedures for subjects who attend to self-produced cues. These individuals were identified in this study as those who responded to the expression manipulation procedure. Unfortunately, the number of subjects in the High expression effect group was so small that although the correlation was, as expected, considerably larger ($r = .33$,) one can have no real confidence that it is different from zero. At this point, then, this explanation must be considered untested.

The most reasonable conclusion at this point seems to be that the two experimental procedures studied here do involve similar processes and similar variations among individuals in those processes. The "cue attentiveness" dimension seems attractive as a description of those variations among individuals, but the data do not provide unambiguous support.

Nonetheless, these results do support the supposition which generated this study, that self-attribution processes are similar across differing contents (attitudes vs. emotions) and kinds of input (verbal statements vs. facial expressions). It certainly seems profitable to explore further the generality of these consistencies across other self-attribution contents and inputs.

In a larger context these results have a different kind of import. Both the forced-compliance effects and those of the expression manipulation have been explained by other, very

different theoretical conceptions. The effects of counter-attitudinal behavior have been explained more commonly by cognitive dissonance theory (Brehm & Cohen, 1962; Festinger, 1957). The controversy between the dissonance and self-attribution viewpoints has gone on for some time, is not yet resolved, and was certainly not the focus of this study. However, these results do bear slightly on this controversy, inasmuch as if one is to hold to a dissonance view, then one must somehow extend the theory to explain the effects of the expression manipulation, where there is not, for instance, any previous emotion to be dissonant with that implied by the expression.

Similarly, the effects of the expression manipulations on emotional experience might be explained by a number of theories which share James' (1922) assumption that our experience of our emotions is somehow based on our patterns of bodily activity (e.g., Gellhorn, 1964; Izard, 1971; Tomkins, 1962). The major difference between these neo-Jamesian views and the self-attribution conception is that the former seem to conceive of the relationship between facial expressions and feelings as a sensation-like, very close and invariant correspondence, rather than as the result of a kind of interpretive process. Although at first glance this difference may seem small, it leads to a number of different kinds of predictions. One, for instance is embodied in this study, that although facial expressions may serve as "data" for emotional interpretations, so may a great many other things, including situational cues.

The interpretative task which these results pose for these neo-Jamesian theories is comparable to that posed for dissonance theory. While these theories comfortably explain the basic effects of expression manipulations and might be adapted to account for individual differences, they must now also account for the relationships between the two kinds of individual differences. The strength of self-attribution theory is precisely that it can account for these relationships and in fact predict them.

One final feature of the study deserves highlighting. Earlier studies with the expression manipulation (Laird, 1974; Laird & Crosby, 1974) did not employ a neutral expression condition and hence left unclear the individual effects of the particular expressions. In this study a neutral expression condition was employed and clearly both expressions had effects, effects which were different, and specific to the expressions themselves. It is then truly an effect of expressions and not just of a frown or a smile alone.

References

Brehm, J. W., & Cohen, A. R. Explorations in cognitive dissonance. New York: Wiley, 1962.

Comer, R., & Laird, J. D. Choosing to suffer as a consequence of expecting to suffer: Why do people do it? Journal of Personality and Social Psychology, 32, 92-101.

Festinger, L. A theory of cognitive dissonance. Stanford: Stanford University Press, 1957.

Gellhorn, E. Motion and emotion: The role of proprioception in the physiology and pathology of emotions. Psychological Review, 1964, 71, 457-472.

Izard, C. E. The face of emotion. New York: Appleton-Century-Crofts, 1971.

James, W. What is emotion? In C. G. Lange and W. James, The emotions. Baltimore: Williams and Wilkins, 1922.

Laird, J. D. Self-attribution of emotion: The effects of expressive behavior on the quality of emotional experience. Journal of Personality and Social Psychology, 1974, 29, 475-486.

Laird, J. D., & Berglas, S. Individual differences in the effects of engaging in counter-attitudinal behavior. Journal of Personality, 1975, 43, 286-304.

Laird, J. D., & Crosby, M. Individual differences in self-attribution of emotion. In H. London and R. Nisbett (Eds.), Thinking and feeling: The cognitive alteration of feeling states. Chicago: Aldine-Atherton, 1974.

Nowlis, V. Research with the mood adjective check list. In S. Tomkins and C. Izard (Eds.), Affect: Measurement of awareness and performance. New York: Springer, 1968.

Schachter, S. Some extraordinary facts about obese humans and rats. American Psychologist, 1971, 26, 129-144.

Schachter, S., & Latane, B. Crime, cognition and the autonomic nervous systems. In R. Jones (Ed.), Nebraska symposium on motivation. Lincoln: University of Nebraska Press, 1964.

Schachter, S., & Singer, J. Cognitive, social and physiological determinants of emotional state. Psychological Review, 1962, 69, 379-399.

Snyder, M., & Ebbesen, E. B. Dissonance awareness: a test of dissonance theory vs. self-perception theory. Journal of Experimental Social Psychology, 1972, 8, 502-517.

Tomkins, S. S. Affect, imagery, consciousness. New York: Springer, 1962.

Wixon, D. R., & Laird, J. D. Awareness and attitude change in the forced-compliance paradigm: The importance of when. Unpublished paper, 1976.

Table 1

Means Mood Adjective Check List (MACL)

Scores for Different Expression Conditions (N=27)

	Expression Condition			+Values for Comparisons	
MACL Factor Sums	Frown	Neutral	Smile	Frown vs. Neutral	Smile vs. Neutral
Elation	1.9	3.0	4.4	3.49**	2.83**
Surgency	3.7	4.9	6.2	2.10*	2.14*
Aggression	6.3	2.4	2.3	2.43*	.21

*p<.05
**p<.01